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10/030,799	01/11/2002	Steven Donders	14971	5613

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Scully Scott Murphy & Presser
400 Garden City Plaza
Garden City, NY 11530

EXAMINER

MACARTHUR, VICTOR L

ART UNIT

PAPER NUMBER

3679

DATE MAILED: 12/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,799

Applicant(s)

DONDERS, STEVEN

Examiner

Victor MacArthur

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c). See citizenship of applicant section.

Specification

The abstract of the disclosure is objected to because it is in excess of 150 words and is non-narrative. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form. The form and legal phraseology often used in patent claims, such as "comprising" should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details (i.e. with an over measure x). The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases, which can be implied, such as, "The invention relates to".

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-6 and 13:

In claims 1 and 2, it is unclear if the pre-characterized limitations (p.10, ll.3-17 and p10, l.27 – p.11, l.2) are being claimed or are merely an implied admission of what is old in the art. Applicant may intend claims 1 and 2 to be Jepson format claims; however, accepted Jepson format has not been employed (see MPEP §2129). In claim 1, it is unclear whether or not the method step “bringing together the joint recess and the joint ball” in line 20 is meant to be a second accomplishment of the same step recited in line 13. In claims 1 and 2, it is unclear how many times the method step “beading the recess edge” is meant to be accomplished since it appears twice in each claim.

Claim 1 recites the step of “bringing together the joint recess and the joint ball” in line 13. Line 17 of claim 1 then recites the step of “finishing the lateral surface of the piston”. Lines 20-21 recite the step of “bringing together the joint recess and the joint ball after finishing the lateral surface of the piston”. The above mentioned multiple inclusion of steps is incorporated into the claim language in such a way so as to claim a method including the same step twice in conflicting order. This gives rise to indefiniteness and uncertainty as to the scope of the claim since it is unclear whether the “finishing...” is meant to take place before or after the “bringing together...”

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In claims 1 and 4, it is unclear whether the phrase “finishing” refers to a surface treatment or a statement of finality.

In claim 3 the step “the recess edge is hot-beaded” appears to be a restatement of “Locally heating the recess edge [and] beading the recess edge” in claim 1 from which it depends. This double inclusion of steps gives rise to indefiniteness, as it is unclear how many times the step is to be accomplished.

In claims 1, 2 and 5, it is unclear what elements the pronouns “it” and “its” refer to.

Claim 1 recites the limitation “its lateral surface”. Claims 1 and 2 recite the limitation “the equator”. There is insufficient antecedent basis for these limitations in the claims.

For the reasons mentioned above a great deal of confusion and uncertainty exists as to the proper interpretation of the limitations of claims 1-6 and 13. In accordance with the MPEP § 2173.06, rejection under 35 U.S.C. 102 or 35 U.S.C. 103 of claims 1-6 and 13 as currently written would be improper since doing so would require considerable speculation about the meaning of terms employed in the claims and assumptions as to the scope of the claims. However, references have been cited with this office action in order to give the applicant a better appreciation for relevant prior art.

Claims 7-12, 14 and 15:

In claim 7 it is unclear whether the phrase “it grips behind the joint ball” refers to “it” gripping an element which is located behind the joint ball or gripping the joint ball itself. Claims 8-12, 14 and 15 depend from rejected claim 7 thereby rendering these dependant claims unclear.

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Throughout claims 7, 10, 11 and 14, it is unclear what elements the pronouns "it" and "its" refer to.

Claim 10 recites the broad recitation "metal with a high strength or hardness", and the claim also recites "in particular steel" which is the narrower statement of a range/limitation. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired.

The limitation "its free end" is recited in claim 11. There is insufficient antecedent basis for this limitation in the claim.

The phrases "and/or" and "is or are", which appear in claims 12 and 15, render the claims indefinite because it is unclear what subject matter the applicant regards as the invention.

It is unclear whether the phrase "a conical form" in claim 14, refers to a tool used for shaping or a description of a shape.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7, 9-12, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5007332 to Wagenseil (see attached marked-up copy).

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Claim 7. Wagenseil discloses (fig.1) a ball-and socket joint (16, 17) between a piston (37) and a slipper (top of 18) of a piston machine, having a spherical joint recess (17) on one part of the ball-and-socket joint, in which recess a spherical joint ball (16) on another part of the ball-and-socket joint is pivotally mounted, a recess edge (100) of the joint recess having a bend such that the bend of the recess edge grips the joint ball. Wagenseil does not explicitly disclose that the bend of the recess edge is formed by hot-beading. However, the specific method of forming is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight. See MPEP § 2113.

Claims 9. Wagenseil discloses the ball-and-socket joint according to claim 7, characterized in that the joint recess and the recess edge are arranged on the slipper and the joint ball is arranged on the piston.

Claim 10. Wagenseil discloses the ball-and-socket joint according to claim 9, characterized in that the slipper consists of metal, the slipper having a base region which has a top part (top surface of 18) forming a base surface. Wagenseil does not explicitly state that the top part will function in a sliding manner. However, it is well established that a recitation with respect to the manner in which an apparatus is intended to be employed, *i.e.*, a functional limitation, does not impose any structural limitation upon the claimed apparatus which differentiates it from a prior art reference disclosing the structural limitations of the claim. In re Pearson, 494 F.2d 1399, 181 USPQ 641 (CCPA 1974); In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 136 USPQ 458 (CCPA 1963). Furthermore, the top part of Wagenseil is fully capable of sliding.

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Claims 11 and 14. Wagenseil discloses the ball-and-socket joint according to claim 7, characterized in that the recess edge is cone shaped to converge toward a free end of the recess edge.

Claims 12 and 15. Wagenseil discloses the ball-and-socket joint according to claim 7, characterized in that the piston is nitride hardened (col.4, ll.1-5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5007332 to Wagenseil (see attached marked-up copy).

Wagenseil discloses the ball-and-socket joint according to claim 7, characterized in that the joint recess and the recess edge are arranged on the slipper and the joint ball is arranged on the piston. Wagenseil does not disclose that the joint recess and the recess edge are arranged on the piston and the joint ball is arranged on the slipper. However, the reversal of components in a prior art reference is a design consideration within the skill of the art. In re Gazda, 219 F.2d 449, 104 USPQ 400 (CCPA 1955); In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). Therefore, it would have been obvious to reverse the positioning such that the joint recess and recess edge are arranged on the piston and the joint ball is arranged on the slipper, as such practice is a design consideration within the skill of the art.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Referring to the use of hot forging for reducing the required forging forces in structural components of machinery:

Serope Kalpakjian, *Manufacturing Engineering and Technology*, pp.381 and 383

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor MacArthur whose telephone number is (703) 305-5701. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (703) 308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

VLM

VLM
December 9, 2002

Lynne H. Browne

Lynne H. Browne
Supervisory Patent Examiner
Technology Center 3600

Attachment: 1 marked-up copy of USPN 5007332 to Wagenseil

